

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled).

Claim 2 (currently amended): ~~Method~~ The method according to claim ~~1~~ 12, wherein the measuring device ~~(8)~~ is introduced into the molten metal ~~(4)~~ from a drop station ~~(6)~~.

Claim 3 (currently amended): ~~Method~~ The method according to claim ~~1~~ 12, wherein the method is carried out automatically.

Claim 4 (currently amended): ~~Method~~ The method according to claim ~~1~~ 12, wherein the measurement data are transmitted in the wavelength range of the ISM bands.

Claims 5-6 (canceled).

Claim 7 (currently amended): ~~Device~~ The device according to claim ~~6~~ 13, wherein the transmission antenna ~~(14)~~ is mantled by a coating ~~(18)~~.

Claim 8 (currently amended): ~~Device~~ ~~(3)~~ The device according to claim 7, wherein the measuring device ~~(8)~~ can be introduced into the molten metal ~~(4)~~ from a drop station ~~(6)~~.

Claim 9 (currently amended): ~~Device (3)~~ The device according to ~~the above~~ claim 8, wherein several measuring devices ~~(8)~~ can be magazined in the drop station ~~(6)~~.

Claims 10-11 (canceled).

Claim 12 (new): A method for determining at least one characteristic of a molten metal having a slag layer on a surface of the molten metal comprising the steps of:

(a) providing a measuring device for generating measurement data of the at least one characteristic and a processing device arranged outside the molten metal for processing the measurement data, the measuring device having a bottom end and a transmission antenna for directly and wirelessly transmitting the measurement data to the processing device;

(b) introducing the measuring device into the molten metal so that the bottom end of the measuring device penetrates the slag layer on the surface of the molten metal and immerses into the molten metal and the transmission antenna at least partly projects above the slag layer; and

(c) directly and wirelessly transmitting the measurement data from the measuring device via the antennna to the processing device.

Claim 13 (new) A device for determining at least one characteristic of a molten metal having a slag layer on a surface of the molten metal comprising:

(a) a measuring device for generating measurement data of the at least one characteristic, said measuring device comprising a first bottom end, a second end opposite to said first bottom end, and a transmission antenna arranged at said second end; and

(b) a processing device arranged outside the molten metal for processing the measurement data;

wherein the measuring device is introduceable into the molten metal to perform a measurement and to directly and wirelessly transmit the measuring data from the measuring device to the processing device; and

wherein the antenna is arranged at a sufficient distance from the first bottom end so that upon introduction of the measuring device into the molten metal the bottom end penetrates the slag layer on the surface of the molten metal and immerses into the molten metal and the antenna at least partly projects above the slag layer.

Claim 14 (new): A measuring device for introduction into molten metal having a slag layer on a surface of the molten metal and for generating measurement data of at least one characteristic of the molten metal comprising:

- (a) a first end;
- (b) a second end; and
- (c) a transmission antenna arranged on the second end for directly and wirelessly transmitting data to a processing device located outside the molten metal;

wherein the antenna is arranged at a sufficient distance from the first end so that upon introduction of the measuring device into the molten metal the first end penetrates the slag layer on the surface of the molten metal and immerses into the molten metal and the antenna at least partly projects above the slag layer.